

...MAY 2013 REGIONAL CLIMATE SUMMARY...

SUMMARY FOR THE SAN FRANCISCO BAY AREA AND MONTEREY BAY AREA...

VERY LITTLE RAIN FELL ACROSS THE SAN FRANCISCO AND MONTEREY BAY AREAS DURING MAY...MAKING MAY THE FIFTH CONSECUTIVE MONTH WITH BELOW NORMAL PRECIPITATION. AVERAGE TEMPERATURES WERE ABOVE NORMAL AT NEARLY ALL CLIMATE STATIONS...MAINLY DUE TO A VERY WARM START TO THE MONTH. THERE WERE SEVERAL BREEZY DAYS DURING THE MONTH AND A COUPLE OF DAYS WITH ISOLATED THUNDERSTORMS.

STRONG AND GUSTY NORTHERLY WINDS DEVELOPED ACROSS PORTIONS OF THE SAN FRANCISCO BAY AREA DURING THE EARLY MORNING HOURS OF MAY 1ST. WIND WERE STRONGEST IN THE NORTH AND EAST BAY HILLS WHERE LOCAL GUSTS IN EXCESS OF 55 MPH WERE RECORDED. SOME LOWER ELEVATION LOCATIONS ALSO EXPERIENCED WINDY CONDITIONS. THE NAPA COUNTY AIRPORT HAD A PEAK WIND GUSTS OF 44 MPH EARLY THAT MORNING. THESE GUSTY NORTHERLY WINDS SPREAD A VERY DRY AIRMASS ACROSS THE REGION AND TEMPERATURES WERE STARTING TO CLIMB AS A STRONG UPPER RIDGE OVER THE EASTERN PACIFIC BEGAN TO BUILD INLAND. RED FLAG WARNINGS WERE IN EFFECT FOR THE NORTH AND EAST BAY HILLS ON THE MORNING OF THE 1ST. THE STRONG UPPER RIDGE AND DRY NORTHERLY FLOW COMBINED TO PRODUCE FOUR WARM DAYS FROM THE 1ST THROUGH THE 4TH. THE WARMEST DAYS WERE THURSDAY AND FRIDAY...MAY 2 AND 3. EIGHTEEN DAILY HIGH TEMPERATURE RECORDS WERE SET OR TIED ACROSS THE REGION ON THOSE TWO DAYS. THE UPPER RIDGE BEGAN TO WEAKEN BY SATURDAY THE 4TH...BUT ENOUGH HEAT REMAINED OVER OUR AREA FOR ONE MORE DAILY TEMPERATURE RECORD.

AN UPPER LEVEL LOW PRESSURE AREA THAT INITIALLY DEVELOPED OVER THE NORTHERN ROCKIES ON MAY 3RD RETROGRADED (MOVED TO THE WEST) TO A POSITION OFF THE NORTHERN CALIFORNIA COAST BY SUNDAY MAY 5TH. AS THE LOW MOVED OFFSHORE ON SATURDAY NIGHT AND SUNDAY...GUSTY SOUTH WINDS DEVELOPED ACROSS THE AREA...MAINLY IN COASTAL AREAS WHERE WIND GUSTS IN EXCESS OF 40 MPH WERE COMMON. THIS LOW PRESSURE ALSO PRODUCED ENOUGH INSTABILITY FOR THUNDERSTORM DEVELOPMENT ACROSS NORTHERN AND CENTRAL CALIFORNIA ON MAY 5 AND 6. MOST OF THE THUNDERSTORM ACTIVITY WAS OVER THE HIGHER MOUNTAINS WELL TO THE NORTH AND EAST OF THE SAN FRANCISCO BAY AREA...BUT ISOLATED STORMS DID DEVELOP OVER THE BAY AREA AS WELL. ON THE MORNING OF SUNDAY THE 5TH A LINE OF SHOWERS AND ISOLATED THUNDERSTORMS MOVED THROUGH THE NORTH AND EAST BAY. THEN...LATE ON THE AFTERNOON OF MONDAY MAY 6 AN ISOLATED THUNDERSTORM FORMED OVER NORTHEASTERN CONTRA COSTA COUNTY. THIS STORM PRODUCED BRIEF HEAVY RAIN AND SMALL HAIL NEAR ANTIOCH AND BRENTWOOD. SCATTERED SHOWERS AND THE ISOLATED THUNDERSTORM ON THE 6TH PRODUCED ABOUT A QUARTER INCH OF RAIN ACROSS PORTIONS OF THE NORTH AND EAST BAY. NAPA PICKED UP MORE THAN TWO-THIRDS OF THEIR MONTHLY RAINFALL TOTAL FROM ONE BRIEF SHOWER ON THE 6TH. BECAUSE SHOWERS AND THUNDERSTORMS ON THE 5TH AND 6TH WERE WIDELY SCATTERED...MUCH OF THE REGION RECEIVED LITTLE OR NO PRECIPITATION FROM THIS WEATHER SYSTEM. A NOTABLE EXCEPTION WAS THE SANTA LUCIA MOUNTAIN RANGE. SOUTHERLY FLOW AROUND THE LOW PRESSURE AREA OFFSHORE PUSHED LOW LEVEL MOISTURE UP AGAINST THE SANTA LUCIA RANGE...FORCING THE MOISTURE TO RISE...COOL AND CONDENSE...AND THEN FALL AS RAIN OVER THE MOUNTAINS. SOME ISOLATED AREAS IN THE SANTA LUCIAS PICKED UP AS MUCH AS AN INCH OF RAIN ON THE 5TH AND 6TH.

ABOUT THE ONLY WEATHER OF SIGNIFICANCE THAT OCCURRED FROM THE 7TH THROUGH THE 18TH WAS ON THURSDAY THE 16TH WHEN AN UPPER LEVEL TROUGH GENERATED SOME LIGHT RAIN AND GUSTY WINDS ACROSS THE REGION.

A BRIEF WARM UP OCCURRED ON THE 19TH AND 20TH...BUT THEN TEMPERATURES PLUMMETED ON THE 21ST OF THE MONTH AS A COLD UPPER TROUGH BEGAN TO DIG SOUTH ALONG THE WEST COAST. HIGH TEMPERATURES COOLED BY AS MUCH AS 15 TO 20 DEGREES FROM THE 20TH TO THE 21ST. AS THE COLD UPPER TROUGH DEEPENED ACROSS CALIFORNIA ON THE 21ST...STRONG WESTERLY WINDS DEVELOPED NEAR THE COAST AND IN THE HILLS. LOCALLY BLUSTERY CONDITIONS CONTINUED THROUGH THE 23RD. GUSTY WINDS WERE MOST COMMON NEAR THE COAST DURING THOSE THREE DAYS. THE SAN FRANCISCO AIRPORT EXPERIENCED THE STRONGEST WINDS. A PEAK WIND GUST OF 56 MPH OCCURRED AT SFO DURING THE EVENING OF TUESDAY MAY 21ST.

A LATE SEASON COLD FRONT BROUGHT LIGHT RAIN TO THE REGION ON MEMORIAL DAY (MAY 27). AS MUCH AS A QUARTER TO A THIRD OF AN INCH OF RAIN FELL LOCALLY AT HIGHER ELEVATIONS OF THE NORTH BAY. RAINFALL AMOUNTS FELL OFF SHARPLY FARTHER TO THE SOUTH. MOST OTHER LOCATIONS SAW ONLY A FEW HUNDREDTHS OR JUST A TRACE OF PRECIPITATION ON MEMORIAL DAY.

MONTHLY RAINFALL NORMALS FOR MAY RANGE FROM ABOUT 2 INCHES IN THE WETTEST NORTH BAY MOUNTAIN LOCATIONS TO LESS THAN A HALF INCH IN SOME OF THE DRIER INLAND AREAS. RAIN TOTALS FOR MAY 2013 CAME NO WHERE NEAR THE MONTHLY NORMALS...AND SEVERAL CLIMATE STATIONS PICKED UP NO MEASURABLE PRECIPITATION DURING THE MONTH. A FEW LOCATIONS IN THE NORTH AND EAST BAY MANAGED TO ACCUMULATE A QUARTER TO A THIRD OF THEIR AVERAGE MAY RAINFALL...BUT MOST LOCATIONS CAME IN AT UNDER 10 PERCENT OF NORMAL. MAY 2013 MARKED THE FIFTH CONSECUTIVE MONTH WITH BELOW NORMAL RAINFALL ACROSS THE SAN FRANCISCO BAY AREA AND MONTEREY BAY AREA. COMBINED RAINFALL FOR JANUARY THROUGH MAY WAS THE LOWEST ON RECORD FOR MOST CLIMATE STATIONS.

RAIN TOTALS FOR THE RAIN YEAR THUS FAR...FROM JULY 1 2012 THROUGH MAY 31 2013...RANGED FROM 50 TO 80 PERCENT OF NORMAL ACROSS THE REGION. MOST CLIMATE STATIONS WERE IN THE RANGE OF ABOUT TWO-THIRDS TO THREE-QUARTERS OF NORMAL. WITH ONLY ONE MONTH REMAINING IN THE RAIN YEAR...AND A TYPICALLY DRY MONTH AT THAT...THERE PROBABLY WON'T BE MUCH CHANGE IN THE PERCENT OF NORMAL NUMBERS BY THE TIME THE RAIN YEAR ENDS ON JUNE 30TH.

AVERAGE HIGH TEMPERATURES FOR MAY WERE AS MUCH AS 5 DEGREES ABOVE NORMAL AT A FEW NORTH BAY VALLEY LOCATIONS AND AT SANTA CRUZ. BUT BY AND LARGE AVERAGE TEMPERATURES FOR MAY 2013 WERE JUST SLIGHTLY WARMER THAN NORMAL. HAD IT NOT BEEN FOR THE RECORD-BREAKING HEAT AT THE BEGINNING OF THE MONTH...AVERAGE TEMPERATURES FOR MAY WOULD HAVE BEEN NEAR NORMAL OR EVEN SLIGHTLY BELOW NORMAL.

...MAY REGIONAL TEMPERATURE SUMMARY...

DEPARTURE

DEPARTURE

LOCATION	AVG HIGH	NORMAL HIGH	FROM NORMAL	AVG LOW	NORMAL LOW	FROM NORMAL
NORTH BAY...						
ANGWIN	76.0	73.8	2.2	47.9	47.2	0.7
CALISTOGA	82.5	78.7	3.8	47.5	46.3	1.2
CLOVERDALE	82.0	80.3	1.7	49.5	50.2	-0.7
KENTFIELD	76.5	73.5	3.0	50.6	49.0	1.6
NAPA	79.5	76.2	3.3	50.6	49.6	1.0
NAPA AIRPORT	77.1	72.6	4.5	47.1	45.5	1.6
OCCIDENTAL	73.8	71.1	2.7	48.1	47.9	0.2
PETALUMA AIRPORT	74.4	72.9	1.5	47.6	47.3	0.3
SAINT HELENA	81.8	78.8	3.0	52.5	49.5	3.0
SAN RAFAEL	75.5	70.7	4.8	51.8	50.1	1.7
SONOMA COUNTY AP	79.5	74.5	5.0	47.0	46.4	0.6
SONOMA	77.1	75.9	1.2	48.5	47.1	1.4
SAN FRANCISCO PENINSULA...						
HALF MOON BAY	63.9	61.1	2.8	48.4	46.8	1.6
PALO ALTO	76.0	74.3	1.7	50.0	48.7	1.3
REDWOOD CITY	74.4	73.6	0.8	51.3	50.0	1.3
SAN FRANCISCO AIRPORT	68.4	67.6	0.8	52.5	51.6	0.9
SAN FRANCISCO DOWNTOWN	65.4	64.3	1.1	51.9	51.0	0.9
EAST BAY...						
BERKELEY	72.8	69.7	3.1	50.1	49.4	0.7
CONCORD	80.0	77.3	2.7	54.6	52.9	1.7
CONCORD AIRPORT	78.1	76.3	1.8	52.2	51.7	0.5
FREMONT	72.7	71.9	0.8	52.4	51.6	0.8
HAYWARD AIRPORT	70.8	68.5	2.3	53.9	52.6	1.3
LIVERMORE	79.4	76.9	2.5	51.2	50.2	1.0
LIVERMORE AP	78.1	75.3	2.8	51.8	49.4	2.4
MARTINEZ	81.9	78.8	3.1	50.3	46.4	3.9
MOUNT DIABLO JUNCTION	70.0	70.5	-0.5	50.0	48.9	1.1
NEWARK	71.6	70.8	0.8	54.3	53.2	1.1
OAKLAND	71.2	68.7	2.5	53.6	52.7	0.9
OAKLAND AIRPORT	71.1	67.7	3.4	53.6	51.1	2.5
RICHMOND	71.4	68.8	2.6	53.1	52.1	1.0
SOUTH BAY AND SANTA CRUZ COUNTY...						
GILROY	81.1	78.7	2.4	50.5	49.3	1.2
MOFFETT FIELD	74.5	72.2	2.3	53.8	53.2	0.6
MOUNT HAMILTON	63.9	62.6	1.3	48.1	47.6	0.5
SAN JOSE	74.8	74.3	0.5	52.5	52.4	0.1
SANTA CRUZ	77.2	71.9	5.3	48.9	48.9	0.0
WATSONVILLE	71.7	69.2	2.5	50.0	48.9	1.1
WATSONVILLE AP	71.6	70.0	1.6	47.5	47.6	-0.1
MONTEREY AND SAN BENITO COUNTIES...						

CARMEL VALLEY	74.7	72.7	2.0	45.2	46.1	-0.9
HOLLISTER	77.7	74.5	3.2	47.6	47.7	-0.1
KING CITY	80.2	79.2	1.0	47.7	47.1	0.6
MONTEREY	65.0	63.0	2.0	49.0	48.1	0.9
MONTEREY AIRPORT	65.9	63.5	2.4	50.6	49.9	0.7
PINNACLES NP	80.7	79.8	0.9	44.5	43.0	1.5
SALINAS	71.0	68.1	2.9	48.8	48.2	0.6
SALINAS AIRPORT	69.7	68.4	1.3	51.1	50.3	0.8

...MAY REGIONAL PRECIPITATION SUMMARY...

LOCATION	MAY TOTAL	NORMAL MAY PRECIP	PERCENT OF NORMAL
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NORTH BAY...

ANGWIN	0.13	1.53	8
CALISTOGA	0.00	1.40	0
CLOVERDALE	0.22	1.44	15
KENTFIELD	0.05	1.48	3
MUIR WOODS	0.31	1.37	23
NAPA	0.34	1.03	33
NAPA AIRPORT	0.08	0.82	10
OCCIDENTAL	0.33	2.15	15
PETALUMA AIRPORT	0.21	0.87	24
SAINT HELENA	0.00	1.30	0
SAN RAFAEL	0.02	0.89	2
SONOMA COUNTY AP	0.17	1.33	13
SONOMA	0.30	1.06	28

SAN FRANCISCO PENINSULA...

HALF MOON BAY	0.24	0.98	24
PALO ALTO	0.00	0.48	0
REDWOOD CITY	0.01	0.47	2
SAN FRANCISCO AIRPORT	0.01	0.47	2
SAN FRANCISCO DOWNTOWN	0.04	0.70	6
WOODSIDE	0.11	0.76	14

EAST BAY...

BERKELEY	0.10	0.86	12
CONCORD	0.03	0.58	5
CONCORD AIRPORT	0.02	0.54	4
FREMONT	0.00	0.49	0
HAYWARD AIRPORT	0.03	0.55	5
LIVERMORE	0.14	0.48	29
LIVERMORE AIRPORT	0.12	0.62	19
MARTINEZ	0.01	0.60	2
MOUNT DIABLO JUNCTION	0.07	1.06	7
NEWARK	0.00	0.48	0

OAKLAND	0.04	0.77	5
OAKLAND AIRPORT	0.02	0.68	3
RICHMOND	0.03	0.75	4

SOUTH BAY AND SANTA CRUZ COUNTY...

BEN LOMOND	0.01	1.23	1
GILROY	0.00	0.49	0
MOFFETT FIELD	0.01	0.47	2
MOUNT HAMILTON	0.07	1.11	6
SAN JOSE	0.01	0.51	2
SANTA CRUZ	0.02	0.84	2
WATSONVILLE	0.00	0.60	0
WATSONVILLE AP	0.00	0.63	0

MONTEREY AND SAN BENITO COUNTIES...

CARMEL VALLEY	0.02	0.51	4
HOLLISTER	0.00	0.40	0
KING CITY	0.00	0.31	0
MONTEREY	0.07	0.56	13
MONTEREY AIRPORT	0.02	0.50	4
PINNACLES NATL MON	0.06	0.52	12
SALINAS	0.00	0.45	0
SALINAS AIRPORT	0.01	0.35	3

...DAILY TEMPERATURE RECORDS FOR MAY 2013...

	LOCATION	RECORD MAXIMUM TEMP	PREVIOUS RECORD
5/02	SAN FRANCISCO	88	86 IN 1992
5/02	SAN FRANCISCO AIRPORT	89	84 IN 1992
5/02	OAKLAND	90	84 IN 1992
5/02	MOFFETT FIELD	91	91 IN 1990
5/02	SAN JOSE	92	92 IN 1996
5/02	MONTEREY	83	82 IN 1970
5/02	KING CITY	97	97 IN 2004
5/03	NAPA	92	92 IN 2001
5/03	SAN FRANCISCO	79	79 IN 1989
5/03	SAN FRANCISCO AIRPORT	85	79 IN 1953
5/03	OAKLAND	86	81 IN 2001
5/03	OAKLAND AIRPORT	88	82 IN 2001

5/03	MOFFETT FIELD	88	83 IN 1989
5/03	SAN JOSE	90	90 IN 1992
5/03	SANTA CRUZ	92	89 IN 1970
5/03	MONTEREY	83	82 IN 1953
5/03	SALINAS	88	86 IN 1970
5/03	SALINAS AIRPORT	88	86 IN 1970
5/04	SAN FRANCISCO AIRPORT	84	84 IN 2011

...MONTHLY RANKS FOR DOWNTOWN SAN FRANCISCO...

AVERAGE HIGH TEMPERATURE....65.4....26TH WARMEST OUT OF 139 YEARS
 AVERAGE LOW TEMPERATURE.....51.9....34TH WARMEST OUT OF 139 YEARS
 PRECIPITATION..... 0.04 IN....23RD DRIEST OUT OF 164 YEARS

...MONTHLY EXTREMES FOR SELECT LOCATIONS...

LOCATION	WARMEST DAY (S)	COOLEST DAY (S)	WETTEST DAY (S)
SANTA ROSA AIRPORT	5/31 93 DEG	5/24 39 DEG	5/27 0.16 IN
SAN FRANCISCO	5/02 88 DEG	5/23 48 DEG	5/27 0.03 IN
LIVERMORE AIRPORT	5/11 94 DEG	5/22 44 DEG	5/06 0.09 IN
SAN JOSE	5/02 92 DEG	5/24 45 DEG	5/16 0.01 IN
SALINAS AIRPORT	5/02 89 DEG	5/24 45 DEG	5/28 0.01 IN

NOTE: THIS CLIMATOLOGICAL DATA IS PRELIMINARY. FOR OFFICIAL
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